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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,694	12/11/2003	David W. Boerstler	ROC920030116US1	8664
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IBM CORPORATION ROCHESTER IP LAW DEPT. 917 3605 HIGHWAY 52 NORTH ROCHESTER, MN 55901-7829			EXAMINER NGUYEN, HAI L	
			ART UNIT	PAPER NUMBER
			2816	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,694

Applicant(s)

BOERSTLER ET AL.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/29/04 & 02/28/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10-15 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed limitations that “determine if only one of the input select signals is in the first logic state, and if so, output at least the select signal that is in the first logic state”, in claim 10. The details of such claimed functions are not seen in the description of the preferred embodiment. Therefore, it is not clear as currently defined, how the circuits can perform those recited functions as recited in claim 10. Furthermore, claim 17 is similarly rejected; note the above discussion with regard to claim 10.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 9-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite because the limitation in the last 2 lines is unclear. Insofar as understood, the recited limitation "wherein preventing a first of the select signals that is in the first logic state from being provided to the multiplexer until the other select signals are in a second logic state" refers to 114 in Fig. 2 as recited in claim 4. Therefore, it is not clear how the limitation, in the last 2 lines, reads on the preferred embodiment.

Claims 9-15 recite the limitation "the apparatus" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 5-9 and 16 are rejected under 35 U.S.C 102(e) as being anticipated by Nguyen (US 6,600,355).

With regard to claims 1 and 8, Nguyen discloses in Figs. 2-3A a multiplexer system, and a method of use thereof, comprising a multiplexer (202) having a plurality of data input nodes adapted to receive a plurality of input signals (CLK0, CLK90, CLK180, CLK270); an output node (CKOUT) adapted to selectively output one of the plurality of input signals; a plurality of select nodes, each select node corresponding to a different one of the plurality of data input nodes and adapted to cause the multiplexer to select a different one of the plurality of input

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signals for output by the output node in response to a select signal of a first logic state being provided to the select node; and selection circuitry (201) coupled to the multiplexer and adapted to prevent a first of the select signals that is in the first logic state from being provided to the multiplexer until the other select signals are in a second logic state.

With regard to claims 2 and 9, the plurality of input signals comprises a plurality of clock signals (CLK0, CLK90, CLK180, CLK270).

With regard to claim 3, wherein the plurality of clock signals are asynchronous relative to one another (as depicted in Fig. 3A).

With regard to claim 5, the method further comprises a step of synchronizing the first (S0) of the select signals with a corresponding first (CLK0) of the input signals of the multiplexer prior to providing the first of the select signals to the multiplexer (as depicted in Fig. 3).

With regard to claim 6, wherein synchronizing the first (S0) of the select signals comprises preventing the first (CLK0) of the select signals from reaching the multiplexer until after a rising edge and a falling edge of the first of the input signals (as depicted in Fig. 3A).

With regard to claims 7 and 16, Nguyen discloses in Figs. 2-3A a multiplexer system, and a method of use thereof, comprising a multiplexer (202) having a plurality of data input nodes adapted to receive a plurality of input signals (CLK0, CLK90, CLK180, CLK270); an output node (CKOUT) adapted to selectively output one of the plurality of input signals; and a plurality of select nodes, each select node corresponding to a different one of the plurality of data input nodes and adapted to cause the multiplexer to select a different one of the plurality of input signals for output by the output node in response to a select signal of a first logic state being

provided to the select node; and selection circuitry (201) coupled to the multiplexer and adapted to: prevent a first of the select signals that is in the first logic state from being provided to the multiplexer until the other select signals are in a second logic state; and prevent the first of the select signals from reaching the multiplexer until after a rising edge and a falling edge of a corresponding first (CLK0) of the input signals of the multiplexer (see Fig. 3).

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For example, Boerstler et al. (US 7,245,161) is cited as of interest because it discloses an apparatus and method for verifying glitch-free operation of a multiplexer.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Richards can be reached on 571-272-1736. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HLN 
September 27, 2007


N. DREW RICHARDS
SUPERVISORY PATENT EXAMINER